



City of Leavenworth
100 N. 5th Street
Leavenworth, Kansas 66048

CITY COMMISSION STUDY SESSION
COMMISSION CHAMBERS
TUESDAY, JULY 20, 2021 7:00 P.M.

Welcome to your City Commission Study Session – Please turn off or silence all cell phones during the meeting
Meetings are televised everyday on Channel 2 at 7 p.m. and midnight and available for viewing on YouTube and Facebook Live

Study Session:

1. Speed Study – 4th Street from Eisenhower to Metropolitan (pg. 2)
2. Review Enterprise Fleet Management Vehicle Lease Program (pg. 6)

POLICY REPORT PWD NO. 21-27

Speed Study on 4th Street – Eisenhower to Metropolitan

July 20, 2021

Prepared by:

Reviewed by:



Brian Faust, P.E.,
Director of Public Works



Paul Krarner
City Manager

ISSUE:

Speed limits posted on 4th street include 45mph, 35mph, 30mph and 20mph. Are these posted speed limits appropriate based on traffic volumes, roadway features and business/residential access?

DISCUSSION:

The Federal Highway Administration (FHA) publishes a 'Speed Limit Basics' flyer that provides a quick overview of how and why speed limits are set as they are. Along 4th Street, the posted speed limit varies between 45mph and 20mph depending on location. Speed limits posted incorrectly are often ignored by the public. The number of accidents can increase if a street is posted too low or too high.

Based on staff's observation of traffic along 4th Street, the posted speeds may not fit the actual conditions and we recommend that a speed study be conducted. The study would be done at various points along 4th to help determine the 85th percentile speed for the roadway. The 85th percentile speed is the speed that 85% of the drivers are traveling at or below. This is used extensively by traffic engineers as the majority of drivers choose reasonable speeds for given road conditions.

Proposed study locations:

- S. 4th Street south of Commercial Street (to capture 45mph speed limit)
- S. 4th Street south of Tanglewood Street/Trailhead Lane (to capture 35mph speed limit)
- S. 4th Street north of Santa Fe Street (to capture 30mph speed limit)
- S. 4th Street north of Elm Street (to capture 30mph speed limit)
- S. 4th Street north of Chestnut Street (to capture 30mph speed limit)
- S. 4th Street north of Kickapoo Street (to capture 30mph speed limit)

ATTACHMENTS:

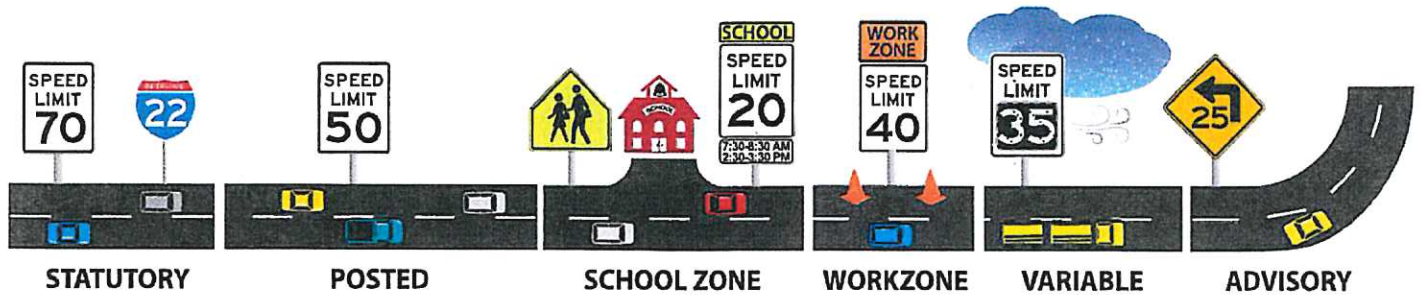
Speed Limit Basics – Federal Highway Administration
Map of Speed Study Locations – 4th Street

SPEED LIMIT Basics



U.S. Department of Transportation
Federal Highway Administration

Speed limits frame expectations for drivers and other roadway users. Properly set speed limits provide a safe, consistent, and reasonable speed to protect drivers, pedestrians, and bicyclists along the roadway. At the same time, speed limits can be a source of frustration and confusion; for example, not all drivers like to travel at the same speed, and some people may not understand why the speed limit changes on a particular road. In addition, community residents often have concerns that traffic is moving too fast through their neighborhoods. Understanding the engineering principles and processes used to set speed limits and learning the terminology used to describe them are the first steps in reducing drivers' frustration or confusion and encouraging compliance.



TYPES OF SPEED LIMITS

STATUTORY SPEED LIMITS

Statutory speed limits are established by State legislatures for specific types of roads (e.g., Interstates, rural highways, urban streets) and can vary from State to State. They are enforceable by law and are applicable even if the speed limit sign is not posted. Examples of statutory speed limits include:

- 25 mph in residential or school districts,
- 55 mph on rural highways, and
- 70 mph on rural Interstate highways.

POSTED SPEED LIMIT

Posted speed limits (sometimes called regulatory speed limits) are those that are sign-posted along the road and are enforceable by law. A posted speed limit could be the same as the statutory speed set by the State legislature, or it could be established by a city, county, or State transportation agency as an adjustment to the statutory speed limit. Some cities and counties will establish a blanket speed limit for roads in their jurisdictions. Those limits are generally posted at the city limits or county lines. The posted speed limit can differ from the statutory speed limit; in these cases, the posted speed limit is determined using an engineering speed study and takes priority over the established statutory speed limit.

"SPECIAL CONDITIONS" SPEED LIMITS

School zone speed limits are used in specific locations during the hours when children are going to and from school. Most States use a school zone speed limit of 15 to 25 mph in urban and suburban areas.

Work zone speed limits are set as part of the work zone's traffic control plan, which is used to help facilitate safe and efficient movement of traffic through a work zone. Factors that influence work zone speed limits can include:

- The posted speed limit when the work zone is not present,
- The location of the work zone and workers in relation to traffic,
- The type of traffic control (e.g., cones, barrels, concrete barriers), and
- The complexity of the work zone (e.g., lane shifts, narrowed lanes).

Variable speed limits are displayed on changeable message signs (CMS) at locations where roadway conditions regularly require speeds to reduce more than 10 mph below the posted speed limit. These instances typically occur due to weather conditions, congestion, traffic incidents, and/or work zones.

Advisory speeds are a non-regulatory speed posted for a small portion or isolated section of a roadway (e.g., a sharp curve, an exit ramp) to inform a driver of a safe driving speed. They are set using an engineering speed study and in accordance with guidance in the *Manual on Uniform Traffic Control Devices* (MUTCD).

What is included in an engineering speed study?

- Speeds of motorists in normal conditions
- Traffic volume
- Roadway type (e.g., interstate, freeway, city street)
- Roadway features (e.g., curves, hills, number of lanes)
- Roadway setting (e.g., urban, rural, residential, woodland, farmland)
- Number and spacing of driveways or intersections
- Sight distances
- Presence of on-street parking
- Pedestrian or bicyclist activity
- Crash history
- Pavement condition

ESTABLISHING SPEED LIMITS

State and local transportation agencies recommend and set appropriate speed limits by completing engineering speed studies and following the guidance presented in the [MUTCD](#). Practitioners may also use a supporting web-based tool called [USLIMITS2](#), which provides an objective second opinion and helps support speed-limit-setting decisions. At times, agencies may need to implement speed management countermeasures to achieve the desired speed for a particular roadway (e.g., in areas with high pedestrian and bicyclist activity). Review FHWA's *Speed Management Countermeasures: More than Just Speed Humps* for more information on speed management countermeasures.

SPEED CONCEPTS

Besides the types of speed limits, there are concepts relating to speed that are important to understand.

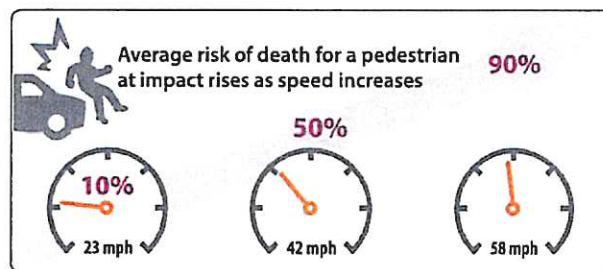
- Before a new road is built, engineers choose a **design speed** in order to guide their design decisions and prepare the plans.
- Once the road is built, engineers will evaluate the existing speeds by measuring the **operating speed**. They often do this by measuring the speed that 85 percent of drivers are travelling at or below, called **85th percentile speed**.
- Used extensively in the traffic engineering field, the **85th percentile speed** is based on the premise that the majority of drivers choose reasonable speeds for given road conditions and should be accommodated.

CORRECTING COMMON MISCONCEPTIONS

- The Federal Government does NOT set or enforce speed limits; this authority belongs to the State and local agencies that have jurisdiction over the road.
- The 85th percentile speed is not the only factor practitioners evaluate when determining an appropriate speed limit; they complete engineering speed studies and often utilize supporting tools like [USLIMITS2](#).
- Simply lowering the speed limit does not guarantee motorists will drive slower; speed management countermeasures may have to be implemented along the roadway.

SPEED SAFETY FACTS

- Drivers who exceed the posted speed limit or drive too fast for conditions are involved in nearly one-third of all fatal crashes.
- Only 13 percent of speeding-related fatalities occur on interstate highways.
- More than 40 percent of speeding drivers in fatal crashes were considered to be alcohol-impaired.



SOURCE: AAA Foundation for Traffic Safety, *Impact Speed and a Pedestrian's Risk of Severe Injury or Death*, September 2011.

FOR MORE INFORMATION

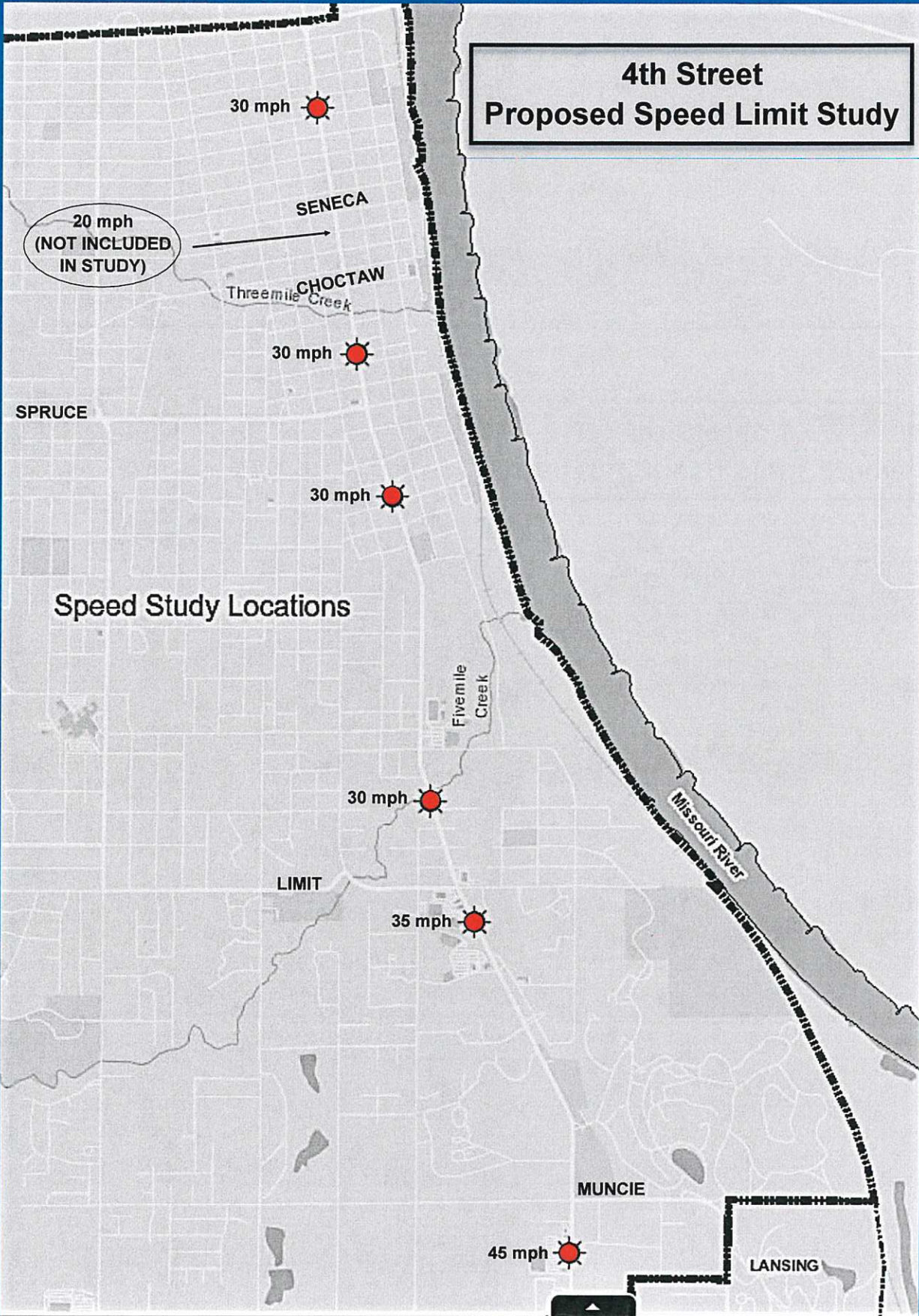


To learn more about speed management, visit [FHWA's Speed Management Safety web page](#).



For more information on speed management, check out FHWA's *Speed Management Countermeasures: More than Just Speed Humps* fact sheet.

4th Street Proposed Speed Limit Study



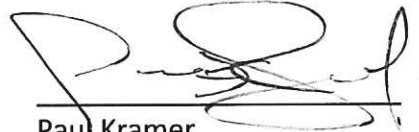
Policy Report
REVIEW ENTERPRISE FLEET MANAGEMENT PROGRAM
July 20, 2021

Prepared By:



Taylour Tedder
Assistant City Manager

Reviewed By:



Paul Kramer
City Manager

BACKGROUND:

City staff have been considering the Enterprise Fleet Management lease program recently as many other public agencies in the area have had success with this program. Specifically, clients in our area include Leavenworth County, City of Lenexa, City of Prairie Village, Olathe Public Schools, City of Gladstone, City of Independence, and many more.

Leasing vehicles through an equity lease program will result in significant savings over time, allowing more funding in the capital improvement program (CIP) for other equipment and projects needed in the City. This program will also result in dramatically reduced maintenance costs and will provide a much more fuel efficient fleet as vehicles are replaced every one to five years depending on the usage. Vehicles obtained through the equity lease program are designed to be used as intended, with no mileage overage fees or wear and tear costs. Aftermarket equipment and up fitting is available for Police and Public Works applications as well as the range of vehicles available goes up to the equivalent of an F-550. Fire trucks, refuse trucks, dump trucks, etc. would not be included as options offered. All types of vehicle brands and trim levels are available within those parameters.

Brandon Scott, Account Executive, with Enterprise Fleet Management will provide a presentation to the City Commission detailing the program.

ATTACHMENTS:

Fleet Synopsis – Ellis County, KS and City of Lenexa Case Study



Ellis
COUNTY
KANSAS

FLEET MANAGEMENT

Fleet Synopsis | Ellis County, KS

Piggyback The Sourcewell Awarded RFP #060618-EFM that addresses the following:

- Access to all fleet management services as applicable to the needs of the County
- Supports the County's need for fleet evaluation on a quarterly basis assessing costs and reviewing best practices

THE SITUATION

Ellis County, KS is looking for a solution to better manage its aging fleet. 43% of the current light and medium duty fleet and do not contain the most up to date safety features, such as airbag standardization, anti-lock brake control, and Electronic Stability Control, which according to the Highway Traffic Safety Administration, is the most important safety feature since the invention of the seatbelt.

- Older vehicles have higher fuel costs, maintenance costs, and tend to be unreliable.
- It would take over 14 years to cycle through the entire fleet with the current acquisition strategy.

THE OBJECTIVES

Enterprise Fleet Management's proposal will save County resources and budget dollars through a managed vehicle program:

- Utilize an open-end lease* as a funding mechanism, allowing the County to acquire additional vehicles while avoiding a large capital budget outlay.
- Replace aged vehicles with newer models to increase fuel efficiency and reduce maintenance expense. Maintenance and repair expenses will be reduced as the age of vehicles is lowered and the integration of more fuel-efficient vehicles will reduce carbon footprint.
- Establish a proactive replacement plan that maximizes potential equity at time of resale, reduces operational expenses, and increases safety.

*An open-end lease means there are no early termination, mileage, or abnormal wear and tear penalties. Leases are written to a residual balance to preserve cash flow. The County receives flexibility of ownership, as well as net equity from sale at time of disposal.

THE RESULTS

The estimated value of 29 of the County's current vehicles to be replaced is approximately \$196,500. The first year's payments for the 29 leased vehicles is expected to be \$237,726. So the cash outlay needed to replace 29 vehicles in year one through the EFM Program would be approximately \$41,000. After one year of service in the County's fleet we intend to sell many of the leased vehicles, order new vehicles to replace them, and return approximately \$140,000 in equity back to the County.

By partnering with Enterprise Fleet Management, it is estimated the County will create a long-term sustainable cost savings of 13% while replacing the heavily aged fleet with newer, safer, and more reliable vehicles. This is expected to reduce maintenance costs by 78% and fuel costs by 20%. **Overall, the Enterprise Fleet Management Program is expected to save Ellis County, KS OVER \$770,000 over the next 10 years.**

Leveraging an open-end lease maximizes cash flow and recognizes equity from vehicles sold. Furthermore, the County will leverage Enterprise Fleet Management's ability to sell vehicles at an average of 109% of Black Book (commercial vehicle) values.

Some other local municipalities currently partnered with Enterprise Fleet Management are the Counties Shawnee, Leavenworth, Geary, UG of Wyandotte; Cities of Lenexa, Prairie Village, Valley Center, Arkansas City, Independence, Raymore, Smithville, Gladstone, Branson, Camdenton, Lake Ozark; and many school districts. References are available upon request.

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Supporting Evidence | Ellis County, KS

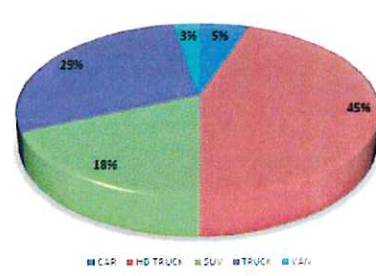
Ellis County, KS - Fleet Profile

Fleet Profile				Fleet Replacement Schedule						Replacement Criteria
Vehicle Type	# of Type	Average Age (years)	Average Annual Mileage	2021	2022	2023	2024	2025	Under-Utilized	
Mid-size Sedan	2	8.7	4,400	0	2	0	0	0	0	
Full-size Van-Passenger	1	7.2	21,700	1	0	0	0	0	0	
Mid Size SUV 4x4	1	11.3	10,100	1	0	0	0	0	0	
Full Size SUV 4x2	2	16.8	6,100	2	0	0	0	0	0	
Full Size SUV 4x4	4	5.9	6,400	1	0	1	0	2	0	
1/2 Ton Pickup Reg 4x4	4	13.0	9,600	4	0	0	0	0	0	
1/2 Ton Pickup Ext 4x2	1	16.3	2,500	1	0	0	0	0	0	
1/2 Ton Pickup Ext 4x4	3	11.3	15,200	2	1	0	0	0	0	
1/2 Ton Pickup Quad 4x2	1	14.3	6,100	1	0	0	0	0	0	
1/2 Ton Pickup Quad 4x4	2	9.8	8,300	1	0	1	0	0	0	
3/4 Ton Pickup Reg 4x2	1	20.4	4,500	1	0	0	0	0	0	
3/4 Ton Pickup Reg 4x4	8	11.8	10,100	5	2	1	0	0	0	
3/4 Ton Pickup Ext 4x4	3	15.7	6,900	1	0	1	0	0	1	
3/4 Ton Pickup Quad 4x4	2	8.2	8,000	1	0	0	0	1	0	
1 Ton Pickup Reg 4x2	2	24.5	4,100	2	0	0	0	0	0	
1 1/2 Ton Cab Chassis	1	15.3	4,200	1	0	0	0	0	0	
Full Size SUV 4x4 - ERV	6	3.3	19,600	0	2	2	0	2	0	
1/2 Ton Pickup Quad 4x4 - ERV	1	4.2	25,300	1	0	0	0	0	0	
Mid Size SUV 4x4 - ERV	3	4.5	23,000	2	0	0	0	1	0	
Full-size Sedan - ERV	6	3.7	16,100	1	2	1	3	0	0	
Totals/Averages	54	9.8	11,700	29	9	7	3	6	1	

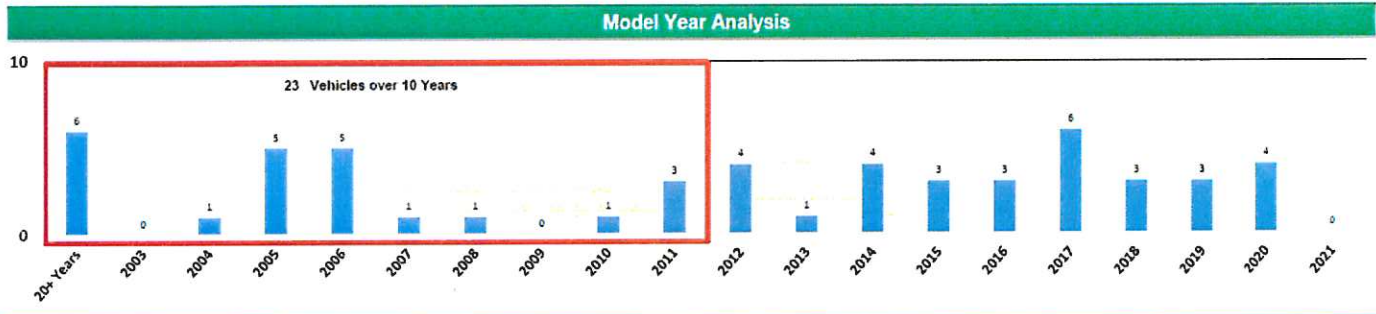
Replacement Criteria

- * Fiscal Year 2021 = 10 years old and older, or odometer over 100,000
- * Fiscal Year 2022 = 8 years old and older, or odometer over 75,000
- * Fiscal Year 2023 = 6 years old and older, or odometer over 50,000
- * Fiscal Year 2024 = 4 years old and older, or odometer over 25,000
- * Fiscal Year 2025 = Remaining Vehicles
- * Underutilized = Annual Mileage less than 2,500

Vehicle Types



■ CAR ■ HD TRUCK ■ SUV ■ VAN

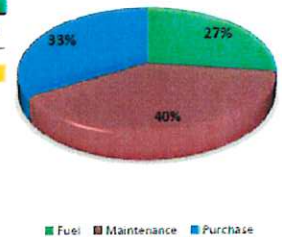


Ellis County, KS - Fleet Planning Analysis

Current Fleet	54	Fleet Growth	-0.42%	Proposed Fleet	53
Current Cycle	14.24	Annual Miles	11,900	Proposed Cycle	3.13
Current Maint.	\$238.00	Current MPG	12	Proposed Maint.	\$63.64
Maint. Cents Per Mile	\$0.24			Price/Gallon	\$2.00

Fleet Costs Analysis

Fiscal Year	Fleet Mix				Fleet Cost				Annual			
	Fleet Size	Annual Needs	Owned	Leased	Purchase	Lease*	Equity (Owned)	Equity (Leased)	Maintenance	Fuel	Fleet Budget	Net Cash
Average	54	3.8	54	0	128,445	0	-3,800		154,224	105,300	384,169	0
'21	53	29	24	29	0	237,726	-196,500		87,211	93,777	222,214	161,955
'22	53	8	16	37	0	266,650	-64,175	-182,956	69,513	90,598	179,629	204,539
'23	53	29	9	44	0	343,724	-89,950	-19,129	54,027	87,816	376,488	7,681
'24	53	6	6	47	0	367,269	-16,200	-237,728	47,390	86,624	247,365	136,813
'25	53	35	0	53	0	412,639	-76,000	-73,986	34,116	84,240	381,009	3,160
'26	53	5	0	53	0	412,639		-302,751	34,116	84,240	228,244	155,924
'27	53	36	0	53	0	412,639		-44,139	34,116	84,240	486,856	-102,698
'28	53	5	0	53	0	412,639		-298,655	34,116	84,240	232,340	151,829
'29	53	36	0	53	0	412,639		-39,214	34,116	84,240	491,781	-107,613
'30	53	5	0	53	0	412,639		-307,559	34,116	84,240	223,436	160,733



10 Year Savings

\$772,335

Avg. Sustainable Savings

\$51,637

Current Fleet Equity Analysis

YEAR	2021	2022	2023	2024	2025	Under-Utilized
QTY	29	8	7	3	6	1
Est \$	\$6,776	\$8,022	\$12,850	\$5,400	\$12,667	\$500
TOTAL	\$196,500	\$64,175	\$89,950	\$16,200	\$76,000	\$500
	Estimated Current Fleet Equity**					\$443,325

* Lease Rates are conservative estimates
 **Estimated Current Fleet Equity is based on the current fleet "sight unseen" and can be adjusted after physical inspection
 Lease Maintenance costs are exclusive of tires unless noted on the lease rate quote.

KEY OBJECTIVES

- Lower average age of the fleet**
43% of the current light and medium duty fleet is over 10 years old
Resale of the aging fleet is significantly reduced
- Reduce operating costs**
Newer vehicles have a significantly lower maintenance expense
Newer vehicles have increased fuel efficiency with new technology implementations
- Maintain a manageable vehicle budget**
Challenged by inconsistent yearly budgets
Currently vehicle budget is underfunded

Supporting Evidence | Ellis County, KS

CASE STUDY | CITY OF LENEXA



The City of Lenexa see big savings with new fleet vehicles.

BACKGROUND

Location: Lenexa, KS
Industry: Government
Total vehicles: 72 vehicles

THE CHALLENGE

The City of Lenexa was holding onto vehicles for 10 years and would only replace the vehicles if maintenance costs became too high or they were inoperable. As issues would arise, city managers would rush to get the vehicle fixed, find funds to cover the repair and make sure the employee was able to do his or her job. The process of maintaining an aged fleet with high and unpredictable maintenance costs became a grueling task for The City to manage.

THE SOLUTION

Enterprise Fleet Management presented the City of Lenexa with a proactive fleet management program. The solution would replace most of the light-duty vehicles within the first year of partnering with Enterprise, which would provide the city with a newer, more reliable fleet.

“We were skeptical at first because the numbers looked too good to be true. Once we made the choice to work with Enterprise Fleet Management, it was exciting to have a new fleet of vehicles for our employees. When we saw savings over 22% on fuel costs, just by switching to newer vehicles, that alone was worth the change.”

— Nick Arena, Asst. Municipal Services Director

By replacing 45 light-duty vehicles in the first year, The City realized immediate operational savings. Enterprise Fleet Management helped acquire vehicles with volume incentives to lower the initial order and reduce the total cost of ownership for the City of Lenexa.

THE RESULTS

The City now offers its employees vehicles that have up-to-date safety features and with overall improved reliability. This has helped improve the satisfaction of the workforce. The partnership has also helped The City standardize its fleet and utilize the best vehicles based on the equipment needed for the job. The program offers flexibility to replace units more frequently, in shorter cycles so it will continue to experience overall savings. With a newer fleet of vehicles, The City of Lenexa experienced a 22% decrease in fuel costs and a 70% decrease in unplanned maintenance expenses. Additionally, the new fleet strategy allows city employees to focus solely on their core responsibilities instead of vehicle maintenance issues.

To learn more, visit efleets.com or call 877-23-FLEET.



Key Results

**22%
SAVINGS
IN FUEL COSTS**



**REDUCED MAINTENANCE
SPEND BY
70%**

**6%
TOTAL SAVINGS
WITH FLEET AGE
LESS THAN 5 YEARS**



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